S.N. 09/965,452 Submitted: 07/29/2004

In the Claims:

1 - 12. (canceled)

- 13. (new) A process of testing a semiconductor wafer comprising:
 - a. providing a semiconductor wafer with a scribe-line region;
 - b. forming a multiple test structures in the scribe-line region;
 - c. forming a test selector structure in the scribe-line region communicable to the multiple test structures;
 - d. forming two probe pads in the scribe-line region communicable to the multiple test structures and the test selector structure;
 - e. applying a voltage signal between the two probe pads and the selector structure to select one of the multiple test structures and to cause a electrical stimulus to be applied to the selected test structure to produce a response; and
 - f. measuring the response at the two probe pads.
- 14. (new) The process of claim 13, wherein the selecting one of the multiple test structures is accomplished by varying the magnitude of the voltage signal.
- 15. (new) The process of claim 13, wherein the selecting one of the multiple test structures is accomplished by varying the magnitude and the duration of the voltage signal.
- 16. (new) The process of claim 13, wherein the voltage signal comprises a DC voltage.
- 17. (new) The process of claim 13, wherein the selector structure comprises a state machine.
- 18. (new) The process of claim 13, wherein the selector structure comprises logic gates.

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19. (new) The process of claim 13, wherein the selector structure comprises CMOS transistors of various sizes.

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- 20. (new) A semiconductor device comprising:
 - a. semiconductor wafer with a scribe-line region;
 - b. a multiple test structures in the scribe-line region;
 - c. a test selector structure in the scribe-line region communicable to the multiple test structures;
 - d. two probe pads in the scribe-line region communicable to the multiple test structures and the test selector structure;
 - e. the device adapted to receive a voltage signal between the two probe pads and the selector structure to select one of the multiple test structures and to cause a electrical stimulus to be applied to the selected test structure to produce a response; and
 - f. the response measurable at the two probe pads.
- 21. (new) The device of claim 20 wherein the selector structure is a multiplexer adapted to select only one test structure at a given voltage signal.
- 22. (new) The device of claim 20, wherein the selecting one of the multiple test structures is accomplished by varying the magnitude and the duration of the voltage signal.
- 23. (new) The device of claim 20, wherein the selecting depends on the magnitude of the voltage signal.
- 24. (new) The device of claim 20, wherein the selecting depends on the magnitude and the duration of the voltage signal.
- 25. (new) The device of claim 20, wherein the selector structure comprises CMOS transistors of various sizes.
- 26. (new) The device of claim 20, wherein the selector structure comprises logic gates.